A STUDY OF THE AGRICULTURAL CONSERVATION PROGRAM IN WYOMING COUNTY, NEW YORK 1937

The Agricultural Adjustment Administration and the New York State College of Agriculture cooperating in an analysis of the Agricultural Conservation Program

by

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F O R E W O R D

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The following study was made by Frank V. Beck, special conservation agent, to determine the effectiveness of the 1937 Agricultural Conservation Program and work out possible practices that would be best adapted to Wyoming County.

Ralph King and George Crowther helped Mr. Beck to gather information in the field.

Everett H. Clark, county agricultural agent of Wyoming County, gave advice and help in selecting roads which traversed typical farm types and land classes.

Harold Peet, chariman of the Wyoming County Conference Planning Committee, gave suggestions as to method of obtaining information from farmers.

Professor E. G. Misner gave many helpful suggestions in the preparation of the mimeographed questionnaire and in the presentation of data.

Miss M. D. Lockwood and Miss Ethel Laycock assisted in tabulating the data and typing the report.

Four hundred and forty-three Wyoming County farmers supplied the information which made this report possible.

Earl A. Flansburgh
New York State Executive Officer.

C O N T E N T S

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Special Conservation Agent
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PURPOSE AND METHODS OF THE STUDY

For several years the farmers of Wyoming County have expressed a need for a study of soil conservation, especially as related to erosion.

The State Agricultural Conservation Committee suggested that a study be made in a selected county to find out what changes, if any, have taken place in farming practices as a result of the Agricultural Conservation Program.

With these two ideas in mind, and because several of the important types of farming in the state to which this program applies are represented in this county, Wyoming County was the county selected for a study of the Agricultural Conservation Program in New York State.

The information gathered was by the personal contact or interview method with a mimeographed questionnaire. The area covered by the study included both good and poor land in all of the important type-of-farming areas. Roads were chosen which traversed both good and poor land. The kinds of road traveled were dirt, gravel, macadam, and concrete. The survey covered both hill and valley farms.

Three trained college men did the field work. The simple and direct questions appearing on the questionnaire were asked every farm operator along a given road regardless of whether or not he was participating in the 1937 Agricultural Conservation Program.

The survey was begun July 12, 1937 and completed September 15, 1937, for 443 farms.

The objectives of this survey were as follows:

1. To determine what changes, if any, have taken place in farming practices as a result of the Agricultural Conservation Program.

2. To determine whether or not this program is changing the farming practices on submarginal farm land.

3. To determine how serious soil erosion is and what methods of erosion-control are being used by the farmers.

4. To use the facts obtained from this survey to help formulate an Experimental Conservation Program which would be suitable for meeting the problems of soil conservation in the county.

Many studies have been made in Wyoming County. In 1932-'33, a farm management survey* was made of 51 farms and the results published. Recently, a tax map, a land classification map, and a preliminary soil map have been prepared, but have not as yet been published. Soil erosion projects have also been carried on by the United States Soil Conservation Service in the northern part of the county. These data, many of which have not yet been published, have been an aid in conducting this study.

LOCATION AND TOPOGRAPHY OF THE COUNTY

Wyoming County is located in the western part of New York State, about 40 miles from Buffalo, the nearest large city. The topography is varied. The river valleys are level to gently rolling. The hills surrounding the valleys are generally steep and rugged. The elevation ranges from about 1000 feet above sea level in the Oatka Valley to about 2000 feet in the township of Wethersfield. At the higher elevations, the land varies from side-hill slopes to gently-rolling and level plateau farms.

LAND UTILIZATION AND CLASSIFICATION

Not all the land is equally adapted to crop production. Land which has

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*Report of a Farm Management Survey in Wyoming County - 1932-'33. A.E. - 58

favorable factors such as fertile, well-drained soil, smooth to rolling topography, adequate rainfall, a long growing season, and a location which is accessible at most seasons of the year, is more intensively used than land which is lacking in one or more of these favorable factors.

Farmers, by years of experimentation, have found the land which can grow economically the best crops. Some of the land which was cleared by the first settlers has proved to be lacking in some of the essential characteristics necessary to grow good crops, and has since been abandoned. Some of this land was neither fertile nor well-drained. This land should now be retired from agriculture and returned to forests.

The land in Wyoming County has been classified by the New York State College of Agriculture on the basis of its use. From observations made in the field, an enumerator indicated with symbols on United States Geological Survey topographic maps which had been ruled into ten-acre squares, what use was being made of each acre of land in the county.

In a similar way, a soil map was prepared by the Department of Agronomy of the New York State College of Agriculture in cooperation with the United States Bureau of Chemistry and Soils. An enumerator indicated the soil types on each ten-acre square.

All of the farm building were classified as to size and condition as well as to occupancy and the apparent amount of business done.

On the basis of land use, soil, the size and condition of farm buildings, topography, elevation, and the results of years of farm management research, the land was classified according to the use to which it is apparently best adapted. Both the present and probable future uses were considered. The land not used for towns, villages, or other industrial or residential purposes, was divided into five land

classes. These classes are represented by numbers; the higher the number, the greater the intensity of use for agricultural purposes.

Definition of Land Classes*

Land Class I has a large proportion of idle land and woods, and most of the farms have already been abandoned. It is primarily adapted to forests and recreational uses.

Land Class II is more intensely used than is Land Class I. Considerable farming is being done, but there is a large amount of idle land and a large number of abandoned farms. The depth of soil, drainage, stoniness and other soil conditions, topography, length of season, use of land, and the size and conditions of the buildings indicate that most of the land is better adapted to forests and recreational uses than to agriculture.

Land Class III is more intensely used than Land Class II. This land is adapted to an extensive type of agriculture and will probably remain in agriculture for many years.

Land Class IV and V are more intensely used than Land Class III. This land has a high proportion of deep, well-drained soils and other favorable factors.

Use of Land in Different Land Classes

The 1930 census reports 384,640 acres in the county. Of this, 333,115 acres were in farms, or 87 per cent of the total area.

The county population, according to the 1930 census was 28,764; of this number 11,566 or 40 per cent, lived on farms. Towns and vilages, classed as residential, represent 2 per cent of the land area.

The land utilization study of Wyoming County indicates that about 81 per cent

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*Land Utilization and Classification in New York - Bulletin 372.

of the land in the county probably will remain in agriculture.

TABLE 1 - THE PER CENT OF THE LAND REPRESENTED BY EACH LAND CLASS[1]
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Proportion of Land Area
	Per Cent
Land Class I	3
Land Class II	13
Land Class IIR	1
Land Class III	48
Land Class IV	26
Land Class V	7
Residential	2
	100

[1] Land Utilization Department, New York State College of Agriculture.

Table 1 shows that 16 per cent has been mapped as Classes I and II which is considered submarginal for farming and better suited to forest and recreational uses. Land Class IIR represents 1 per cent of the area; this land is submarginal for agricultural uses but is near enough to Buffalo to have residential possibilities, which raises the value per acre above the reforestation price.

SOIL TYPES

Many different soil types are found in the county. The higher land classes are comprised of the better soils. Areas of Ontario loam, Honeoye silt loam, and Palmyra are found in Land Classes IV and V. These fertile, deep, well-drained, alkaline soils grow excellent alfalfa and other crops.

Land Classes I and II are characterized by thin, poorly-drained soils. Soil types such as Darien silt loam and Darien silty-clay loam have a heavy subsoil within 6 to 12 inches of the surface. These soils are extremely wet in the spring and are subject to drought in the summer, since the hard pan layer prevents the movement of water either up or down.

*1935 Census

CLIMATE

The average length of growing season varies from 129 days at an elevation of 1700 feet to 138 days at 1200 feet. The weather station* at Arcade (elevation 1700 feet) reports the average date of the last spring frost as May 22nd, and at Letchworth Park Station, (elevation 1200 feet), May 15th. The average date of the first fall frost at Arcade is September 28th and at Letchworth Park, September 30th.

The annual precipitation for the western part of the county is 41.92 inches, and for the eastern part, 28.08 inches. The rainfall during the growing season is 21.30 inches for the western region and 15.02 inches for the eastern region.

The type of farming differs in the two regions. The area of high rainfall and short growing season is predominantly dairy. The area of low rainfall and long growing season is devoted primarily to field beans and wheat.

RESULTS OF THE STUDY

Participation in the 1937 Agricultural Conservation Program

Of the 2,784** farms in Wyoming County, 1283 signed for participation in the 1937 Agricultural Conservation Program. This represents an increase of 63 per cent as compared with 785 under the 1936 Agricultural Conservation Program.

Of the 443 farms surveyed, 260 of the farms visited had signed under the 1937 Agricultural Conservation Program and 183 had not (table 2).

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*The Climate of New York State - Bulletin 444

**1935 Census

TABLE 2 - RELATION OF LAND CLASS TO PARTICIPATION IN 1937 AGRICULTURAL CONSERVATION PROGRAM WYOMING COUNTY, NEW YORK. 1937

Type of Land	Farms Visited	Farms Participating	Proportion Participating
	Number	Number	Per Cent
Land Class II	65	19	29
Land Class III	220	129	59
Land Class IV	99	67	68
Land Class V	59	45	76
All Land Classes	443	260	59

More farmers on good land than farmers on poor land signed under the Program. No data could be obtained for Land Class I as there was no one living on the abandoned farms found in this Land Class. Only 29 per cent of the farms visited in Land Class II were participating in the Program. The reason given for not signing was the lack of money or credit to buy the necessary materials to qualify for a payment. On the good land, Classes IV and V, 68 and 76 per cent, respectively, had signed under the Program.

Types of Farming

Dairy cows are the most important livestock in the county. On January 1, 1935, there were 24,668* dairy cows two years old and over. There were 21,597* sheep on hand January 1, 1935. Horses, hogs, and chickens are also kept on most farms.

The leading cash crops are field beans, wheat, and potatoes. Beans represent about 8.3 per cent of the crop land, wheat 5.8 per cent, and potatoes 5.8 per cent.

For the basis of comparison, the farms surveyed were divided into types based on the importance and size of each enterprise. The following groups were made:

1. Dairy Farms: Those farms which had eight cows or more with less than four acres in potatoes and less than six acres in beans. Dairy cows are the most impor-

*1935 Census

tant source of income on these farms.

2. Dairy-Potato Farms: Those farms which had eight or more cows and four or more acres of potatoes.

3. Dairy-Bean Farms: Those farms which had eight or more cows and six or more acres of beans.

4. Dairy-Bean-Potato Farms: Those farms which had eight or more cows, four or more acres of potatoes, and six or more acres of beans.

5. Bean Farms: Those farms which had six or more acres of beans, but less than eight cows and less than four acres of potatoes.

6. Potato and Bean-Potato Farms: Those farms which had either four acres of potatoes, or four acres of potatoes and six acres of beans, but less than eight cows.

7. Small General Farms: Those farms having less than eight cows, less than four acres of potatoes, and less than six acres of beans, These farms raise a small amount of each kind of crop and livestock. This group also includes part-time farmers who receive part of their income from work off the farm and from other sources.

Elevation

There is a marked correlation between elevation and land class, but none between participating and non-participating farms. The poorest land is located at the highest altitude, and the best at the lowest, namely, in the valleys. Of course, there is some good land on the high plateaus as well as some poor land in the swampy lowlands (table 3).

183
148

TABLE 3 - AVERAGE ELEVATION ON PARTICIPATING, NON-PARTICIPATING AND ALL FARMS IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937.

Type of Land	Participating Farms		Non-Participating Farms		All Farms	
	Farms	Average Elevation	Farms	Average Elevation	Farms	Average Elevation
	Number	Feet	Number	Feet	Number	Feet
Land Class II	19	1642	46	1654	65	1651
Land Class III	129	1584	91	1546	220	1568
Land Class IV	67	1455	32	1453	99	1455
Land Class V	45	1344	14	1321	59	1339
All Land Classes	260	1513	183	1540	443	1524

The elevation of the farm determines to some extent what crops can be grown. Potatoes are most commonly grown between an average elevation of 1600 and 1700 feet (table 4). The average elevation for bean farms is between 1300 and 1400 feet. For dairy and small general farms, the elevation does not make any particular difference. Beans are grown on lower ground where early fall frosts are less common. Potatoes on the other hand require a cool growing season which is provided at the higher elevation.

TABLE 4 - AVERAGE ELEVATION OF DIFFERENT TYPES OF FARMS WYOMING COUNTY, NEW YORK. 1937

Type of Farm	Farms	Average Elevation
	Number	Feet
Dairy	98	1558
Dairy-Potato	78	1673
Dairy-Bean	94	1381
Dairy-Bean-Potato	20	1635
Bean	51	1396
Potato and Bean-Potato	22	1641
Small General Farms	80	1529
All Types	443	1524

Size of Farm

The average size of all farms increased with the land class; the farms on Land Class II were the smallest (145 acres) and those on Land Class V were the largest (176 Acres). Farms participating in the 1937 Program were larger than those which did not participate. The average size of participating farms was 176 acres per farm, compared with 134 acres per farm not participating.

TABLE 5 - SIZE OF PARTICIPATING, NON-PARTICIPATING, AND ALL FARMS IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms		Non-Participating Farms		All Farms	
	Farms	Average Size of Farm	Farms	Average Size of Farm	Farms	Average Size of Farm
	Number	Acres	Number	Acres	Number	Acres
Land Class II	19	140	46	147	65	145
Land Class III	129	172	91	128	220	154
Land Class IV	67	182	32	140	99	169
Land Class V	45	193	14	120	59	176
All Land Classes	260	176	183	134	443	159

Farms which had more than one important enterprise were larger. Beans and dairy, both of which are single-enterprise types of farming, are smaller than the two- or three-enterprise types of farming. Small general farms have the fewest acres per farm and probably include many part-time farms.

TABLE 6 - AVERAGE SIZE OF EACH TYPE OF FARM WYOMING COUNTY, NEW YORK. 1937

Type of Farm	Farms	Size of Farm
	Number	Acres
Dairy	98	158
Dairy-Potato	78	208
Dairy-Bean	94	188
Dairy-Bean-Potato	20	203
Bean	51	131
Potato and Bean-Potato	22	144
Small General Farms	80	88
All Types	443	159

Farm Bureau Membership

The Farm Bureau has actively supported the Agricultural Conservation Program. One-third of the farmers participating in the Program were members of the Farm Bureau (table 7). Less than one-eighth of the non-participating farms visited were Farm Bureau Members.

TABLE 7 - COMPARISON OF PARTICIPATING AND NON-PARTICIPATING FARMS IN RELATION TO FARM BUREAU MEMBERSHIP IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms			Non-Participating Farms		
	Farms Visited	Farm Bureau Members	Proportion in Farm Bureau	Farms Visited	Farm Bureau Members	Proportion in Farm Bureau
	Number	Number	Per Cent	Number	Number	Per Cent
Land Class II	19	--	--	46	2	4
Land Class III	129	35	27	91	12	13
Land Class IV	67	22	33	32	4	13
Land Class V	45	28	62	14	4	29
All Land Classes	260	85	33	183	22	12

A higher proportion of the farmers are Farm Bureau Members in Land Class V as compared with Land Class II (table 8).

About every other farmer in Land Class V belongs to the Farm Bureau, while only three per cent of the farmers visited in Land Class II were members of the Farm Bureau.

TABLE 8 - RELATION OF LAND CLASS TO FARM BUREAU MEMBERSHIP
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Farms Visited	Farm Bureau Members	Proportion in Farm Bureau
	Number	Number	Per Cent
Land Class II	65	2	3
Land Class III	220	47	21
Land Class IV	99	26	26
Land Class V	59	32	54
All Land Classes	443	107	24

Small general farms and specialized dairy farms were not as interested in obtaining the services offered by the Farm Bureau as the farms combining cash crops with dairy (table 9).

TABLE 9 - FARM BUREAU MEMBERSHIP AS RELATED TO TYPE OF FARM
WYOMING COUNTY, NEW YORK. 1937

Type of Farm	Farms Visited	Farm Bureau Members	Proportion in Farm Bureau
	Number	Number	Per Cent
Dairy	98	15	15
Dairy-Potato	78	24	31
Dairy-Bean	94	31	33
Dairy-Bean-Potato	20	10	50
Bean	51	15	29
Potato	22	5	23
Small General Farms	80	7	9
All Types	443	107	24

Tenure

The problem of tenancy is not particularly important in Wyoming County. The Federal Census shows that only 15 per cent of the total number of farms in the county were operated by tenants in 1930. Both cash and share rented farms were included in this survey. Tenant farms average larger than owned farms (table 10).

TABLE 10 - RELATION OF SIZE OF FARM TO FARM OWNERSHIP* IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Owned Farms		Tenant Farms	
	Farms	Acres per Farm	Farms	Acres per Farm
	Number	Acres	Number	Acres
Land Class II	50	131	13	189
Land Class III	157	142	30	160
Land Class IV	68	160	11	155
Land Class V	39	147	9	178
All Land Classes	314	145	63	168

*Sixty-six farms partly owned and partly rented were not included in this table. Only farms entirely owned or entirely rented were considered.

Of the farm owners, 58 per cent signed under the 1937 Agricultural Conservation Program. Of the tenants, 46 per cent signed under the Program (tables 11 and 12).

TABLE 11 - PARTICIPATION IN THE 1937 AGRICULTURAL CONSERVATION PROGRAM ON OWNED FARMS IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Owned Farms	Owned Farms Participating	Proportion Participating
	Number	Number	Per Cent
Land Class II	50	17	34
Land Class III	157	92	59
Land Class IV	68	45	66
Land Class V	39	29	74
All Land Classes	314	183	58

*Sixty-six farms partly owned and partly rented were not included in this table. Only farms entirely owned or entirely rented were considered.

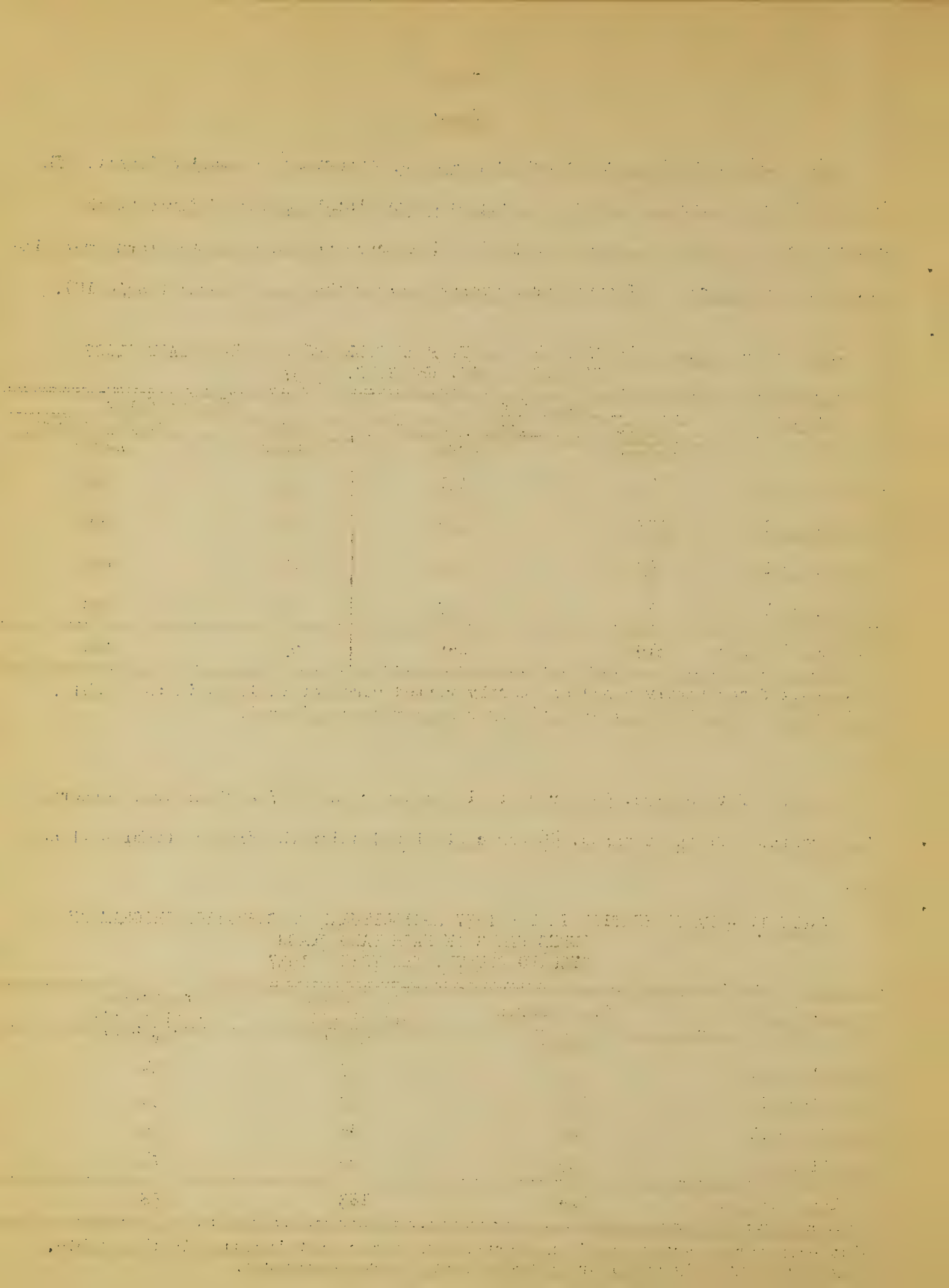


TABLE 12 - PARTICIPATION IN THE 1937 AGRICULTURAL CONSERVATION PROGRAM ON TENANT FARMS IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937

Type of Land	Rented Farms	Rented Farms Participating	Proportion Participating
	Number	Number	Per Cent
Land Class II	13	2	15
Land Class III	30	13	43
Land Class IV	11	6	55
Land Class V	9	8	89
All Land Classes	63	29	46

*Sixty-six farms partly owned and partly rented were not included in this table. Only farms entirely owned or entirely rented were considered.

Acres Per Farm Devoted to Soil-Depleting and Soil-Conserving Crops

On the better land, more acres per farm are devoted to soil-depleting crops (page 40). Land Class II farms have less than one-half as many acres in soil-depleting crops as Land Class V farms. Reasons for this are, (1) Land Class II farms are smaller, (2) a greater proportion of Land Class II farms is in soil-conserving crops, and (3) a greater proportion of each farm in Land Class II is in pasture and woods.

About one-half of the crop land per farm in Land Class II is in soil-depleting crops; for Land Class V farms, about 68 per cent (table 13).

TABLE 13 - PROPORTION OF CROP LAND PER FARM IN SOIL-DEPLETING CROPS IN EACH LAND CLASS ON PARTICIPATING AND NON-PARTICIPATING FARMS WYOMING COUNTY, NEW YORK, 1934-1937

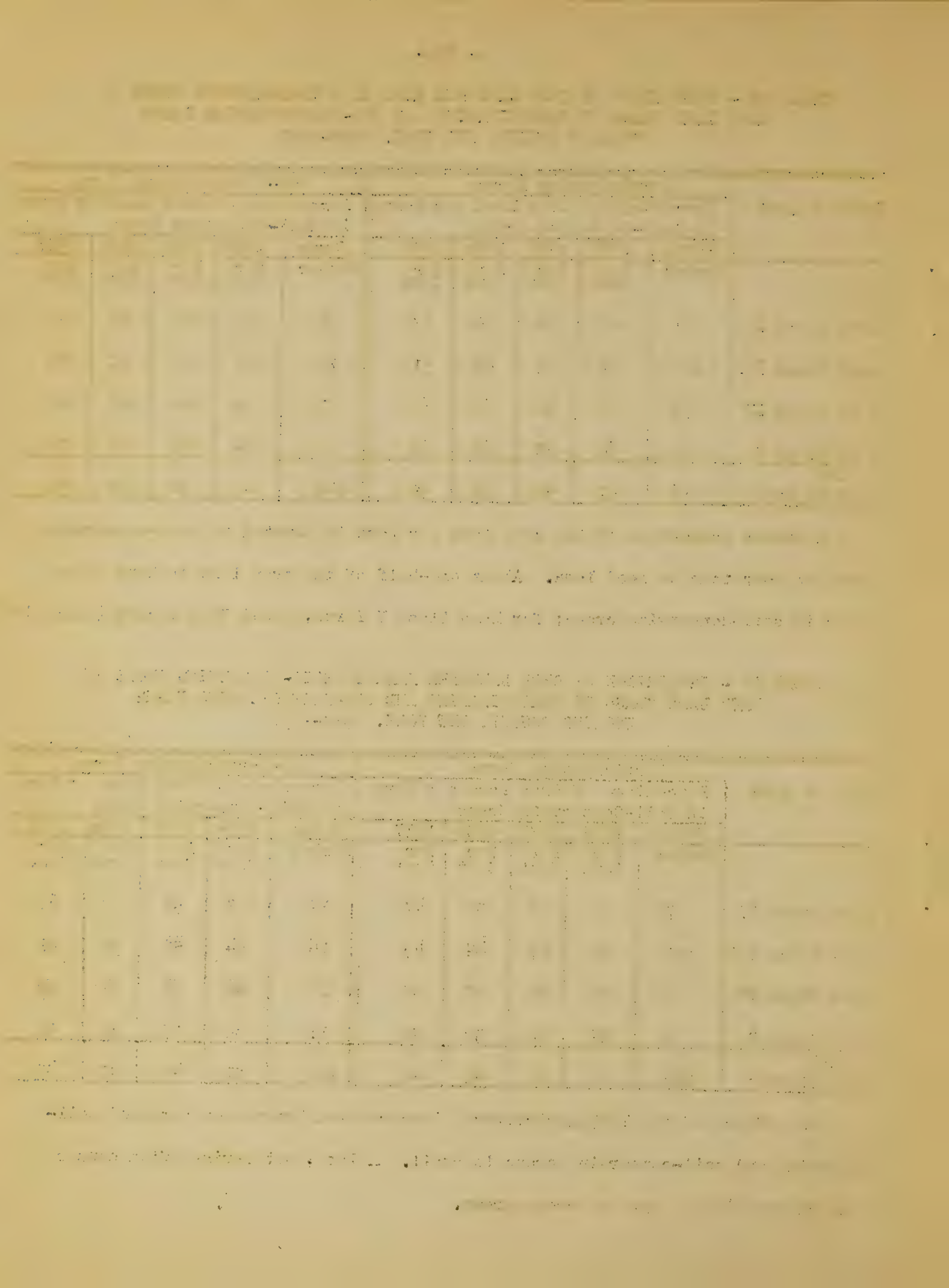
Type of Land	Participating Farms					Non-Participating Farms				
	Percentage of Crop Land per Farm in Soil-Depleting Crops					Percentage of Crop Land per Farm in Soil-Depleting Crops				
	Farms	1934	1935	1936	1937	Farms	1934	1935	1936	1937
	Number	Per Cent	Per Cent	Per Cent	Per Cent	Number	Per Cent	Per Cent	Per Cent	Per Cent
Land Class II	17	45	51	50	53	34	42	42	41	38
Land Class III	111	51	53	52	51	76	46	50	50	48
Land Class IV	53	60	62	63	62	27	58	64	63	62
Land Class V	35	66	68	68	68	11	64	73	70	70
All Land Classes	216	57	58	58	58	148	49	54	53	51

A higher proportion of the crop land per farm is devoted to soil-conserving crops on poor than on good land. About one-half of the crop land in Land Class II is in soil-conserving crops; for Land Class V farms, about 32 per cent (table 14).

TABLE 14 - PROPORTION OF CROP LAND PER FARM IN SOIL-CONSERVING CROPS IN EACH LAND CLASS ON PARTICIPATING AND NON-PARTICIPATING FARMS WYOMING COUNTY, NEW YORK, 1934-1937

Type of Land	Participating Farms					Non-Participating Farms				
	Percentage of Crop Land per Farm in Soil-Conserving Crops					Percentage of Crop Land per Farm in Soil-Conserving Crops				
	Farms	1934	1935	1936	1937	Farms	1934	1935	1936	1937
	Number	Per Cent	Per Cent	Per Cent	Per Cent	Number	Per Cent	Per Cent	Per Cent	Per Cent
Land Class II	17	55	49	50	47	34	58	58	59	62
Land Class III	111	49	47	48	49	76	54	50	50	52
Land Class IV	53	40	38	37	38	27	42	36	37	38
Land Class V	35	34	32	32	32	11	36	27	30	30
All Land Classes	216	43	42	42	42	148	51	46	47	49

The effect of the 1937 Agricultural Conservation Program on acres of soil-depleting and soil-conserving crops is small. A late, wet spring often causes many changes in the type of crops grown.



Number of Livestock

Number of Cows

The number of cows in the County in 1937 was about the same as in 1935. More cows were kept on participating farms than on non-participating farms (table 15). Participating farms averaged about 14 cows per farm, while about 10 cows was the average number kept on non-participating farms. Table 5 indicates that non-participating farms are smaller farms.

Fewer cows per farm are kept on poor land. Land Classes III and IV have the most cows. Land Class V does not have as many cows per farm as Land Classes III and IV, because more of the soil in Land Class V is well adapted to growing cash crops.

TABLE 15 - NUMBER OF COWS PER FARM, 1935 - 1937, ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms				Non-Participating Farms			
		Cows per Farm				Cows per Farm		
	Farms	1935	1936	1937	Farms	1935	1936	1937
	Number	Number	Number	Number	Number	Number	Number	Number
Land Class II	17	8.4	9.1	8.1	34	6.8	6.2	5.3
Land Class III	111	14.5	14.7	14.1	76	10.3	10.4	10.4
Land Class IV	53	15.2	15.4	16.5	27	11.6	12.0	12.1
Land Class V	35	11.9	12.5	12.6	11	8.6	8.9	8.5
All Land Classes	216	13.8	14.1	14.0	148	9.6	9.6	9.4

More cows were kept on strictly dairy farms or where dairying is in combination with cash crops such as beans, wheat, and potatoes. Four times as many cows were kept on those farms as on the cash crop farms or small general farms (table 16).

TABLE 16 - NUMBER OF COWS PER FARM, 1935 - 1937, BY TYPE OF FARMING*
WYOMING COUNTY, NEW YORK. 1937

Type of Farm	Farms	Cows per Farm		
		1935	1936	1937
	Number	Number	Number	Number
Dairy	84	16.5	16.6	16.4
Dairy-Cash Crops	161	16.0	16.5	16.1
Cash Crops	54	3.6	3.5	4.3
Small General	65	3.8	3.4	3.3
All Types	364	12.1	12.3	12.1

*Dairy-Cash Cropsinclude Dairy-Potatoes, Dairy-Beans, Dairy-Bean-Potato farms. Cash Crops include Bean, Potato, and Bean-Potato farms.

Number of Heifers

Heifers have increased during the last three years on both good and poor land (table 17). The number of heifers increased 31 per cent from 1935 to 1937 on the participating farms and 26 per cent on the non-participating farms.

TABLE 17 - NUMBER OF HEIFERS* PER FARM, 1935 - 1937, ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms				Non-Participating Farms			
	Farms	Heifers per Farm			Farms	Heifers per Farm		
		1935	1936	1937		1935	1936	1937
	Number	Number	Number	Number	Number	Number	Number	Number
Land Class II	17	1.8	2.2	3.4	34	1.7	1.7	2.7
Land Class III	111	3.5	3.3	4.9	76	2.4	2.3	2.6
Land Class IV	53	4.2	4.0	4.6	27	2.4	4.2	4.0
Land Class V	35	3.3	4.1	4.4	11	1.3	1.0	2.5
All Land Classes	216	3.5	3.5	4.6	148	2.2	2.4	2.9

*Year old and over

Heifers were kept in largest numbers on the Dairy and Dairy-Cash Crop farms (table 18). These farms also kept more cows per farm.

TABLE 18 - NUMBER OF HEIFERS* PER FARM, 1935 - 1937, BY TYPE OF FARMING
WYOMING COUNTY, NEW YORK. 1937

Type of Farm	Farms	Heifers per Farm		
		1935	1936	1937
	Number	Number	Number	Number
Dairy	84	4.0	3.8	4.9
Dairy-Cash Crops	161	3.9	4.1	5.0
Cash Crops	54	1.1	1.2	1.9
Small General Farms	65	0.9	1.0	1.6
All Types	364	3.0	3.1	3.9

*Year old and over

Number of Sheep

The sheep were concentrated on farms growing cash crops (table 19). The abundance of bean pods and other waste-product feeds largely explains the presence of the sheep on these farms.

TABLE 19 - NUMBER OF SHEEP* PER FARM, 1935 - 1937, BY TYPE OF FARMING
WYOMING COUNTY, NEW YORK. 1937

Type of Farm	Farms	Sheep per Farm		
		1935	1936	1937
	Number	Number	Number	Number
Dairy	84	0.6	0.5	1.8
Dairy-Cash Crops	161	12.0	12.1	9.0
Cash Crops	54	19.4	20.5	17.8
Small General Farms	65	1.6	1.6	1.8
All Types	364	8.6	8.8	7.4

*Feeder sheep not included

There were more sheep per farm on participating than on non-participating farms (table 20). Sheep have decreased since 1935 on participating farms and have remained about the same on non-participating farms.

TABLE 20 - NUMBER OF SHEEP* KEPT DURING THE PERIOD 1935 - 1937 ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms				Non-Participating Farms			
		Sheep per Farm				Sheep per Farm		
	Farms	1935	1936	1937	Farms	1935	1936	1937
	Number	Number	Number	Number	Number	Number	Number	Number
Land Class II	17	0.0	0.0	0.0	34	1.0	1.3	1.2
Land Class III	111	3.5	3.3	2.2	76	0.9	0.8	0.9
Land Class IV	53	14.3	14.4	18.3	27	10.8	10.6	9.4
Land Class V	35	45.3	47.4	30.1	11	2.3	2.3	5.2
All Land Classes	216	12.6	12.9	10.5	148	2.8	2.8	2.8

*Feeder sheep not included.

The survey shows that very few sheep are kept on poor land. The soils in Land Classes IV and V are adapted to cash crops. Field beans, the leading cash crop, furnish an abundance of bean pods, a cheap winter feed for sheep.

Pasture

Acres of Pasture per Farm

The farms on the better land had less total acreage of pasture per farm than on the poor land. A higher proportion of the better farms were in cultivated crops. The farms on Land Class II and III pastured more woodland and had less improved or rotated pasture than farms on either Class IV or V land (table 21).

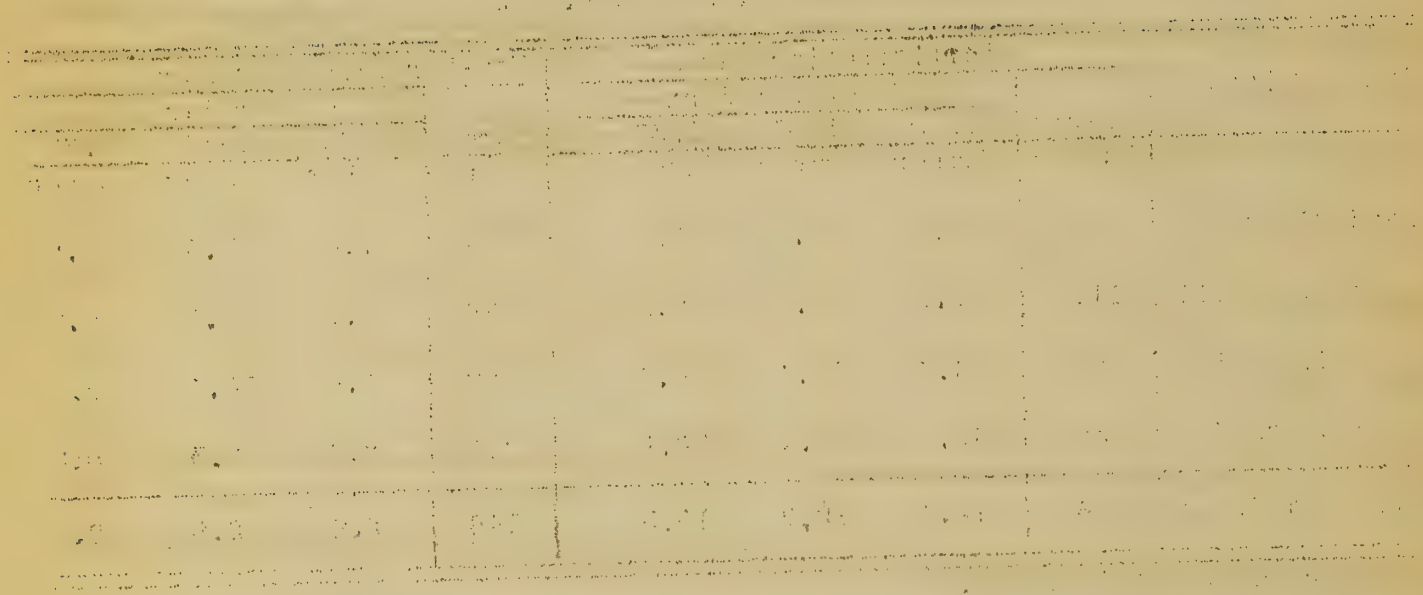


TABLE 21 - ACRES OF PERMANENT, ROTATED, AND WOODED PASTURE PER FARM ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms				Non-Participating Farms			
	Farms	Permanent Pasture	Rotated Pasture	Woods Pastured	Farms	Permanent Pasture	Rotated Pasture	Woods Pastured
	Number	Acres	Acres	Acres	Number	Acres	Acres	Acres
Land Class II	17	30	-	20	34	27	-	19
Land Class III	111	44	3	21	76	40	1	15
Land Class IV	53	35	6	17	27	33	5	11
Land Class V	35	23	10	9	11	22	1	4
All Land Classes	216	37	5	18	148	34	2	14

Excluding livestock from woods pastured

On participating farms more acres of woods have been fenced to exclude livestock than on non-participating farms. During the past two years more acres of woods have been fenced to exclude livestock than had ever been fenced previous to the Program, (table 22). Woods not pastured have more trees per acre than woods pastured. With more trees per acre, the water run-off is less rapid and the dangers of severe soil erosion and flood are materially reduced.

TABLE 22 - ACRES OF WOODS FENCED PER FARM TO KEEP OUT LIVESTOCK ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms			Non-Participating Farms		
		Woods Fenced per Farm			Woods Fenced per Farm	
	Farms	Total previous to 1936	1936 and 1937	Farms	Total previous to 1936	1936 and 1937
	Number	Acres	Acres	Number	Acres	Acres
Land Class II	17	3.4	4.1	34	0.3	0.2
Land Class III	111	1.4	2.6	76	0.8	0.1
Land Class IV	53	2.3	1.2	27	4.4	---
Land Class V	35	1.5	1.5	11	---	---
All Land Classes	216	1.8	2.2	148	1.3	0.1

Seeding Pasture

More acres of pasture have been seeded per farm during 1936 - 1937, (Program years) than were seeded during 1934 - 1935 (two years previous to the Program (table 23). There has been more seeding of pasture on participating farms than on non-participating farms.

TABLE 23 - ACRES OF PASTURE SEEDED 1934-1935 AND 1936-1937 ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms			Non-Participating Farms		
	Farms	Pasture Seeded per Farm		Farms	Pasture Seeded per Farm	
		1934-1935	1936-1937		1934-1935	1936-1937
	Number	Acres	Acres	Number	Acres	Acres
Land Class II	17	0.0	1.2	34	0.0	0.0
Land Class III	111	0.3	0.3	76	0.3	0.3
Land Class IV	53	0.6	1.7	27	0.0	0.5
Land Class V	35	0.1	1.9	11	0.0	1.4
All Land Classes	216	0.3	1.0	148	0.2	0.3

New Seedings

More seeding is always done on good than on poor land. Land Class V farms seed more than twice as many acres per year as do Land Class II farms, (table 24). On participating farms more new seedings have been established during the two Program years than in the previous two years; on non-participating farms the acreage of new seedings decreased during the same period.

Table 24 - ACRES OF NEW SEEDING PER FARM, 1934-1937 IN EACH LAND CLASS ON PARTICIPATING AND NON-PARTICIPATING FARMS WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms					Non-Participating Farms				
	Farms	Acres new seeding per farm				Farms	Acres new seeding per farm			
		1934	1935	1936	1937		1934	1935	1936	1937
	Number	Acres	Acres	Acres	Acres	Number	Acres	Acres	Acres	Acres
Land Class II	17	9.4	10.4	12.9	14.4	34	7.4	7.8	6.9	5.4
Land Class III	111	14.3	14.7	16.1	14.6	76	8.9	10.3	9.9	8.5
Land Class IV	53	18.9	20.2	20.1	20.9	27	16.0	16.7	16.0	15.3
Land Class V	35	22.6	24.3	26.2	25.7	11	12.1	14.5	10.0	13.9
All Land Classes	316	16.4	17.3	18.5	17.9	148	10.1	11.2	10.4	9.5

Green Manure And Cover Crops

Not many of the farms surveyed grew green manure or cover crops during the past four years. Sixteen farms grew green manure in 1934 and twenty-five in 1937. The farms on Land Class V grew the largest acreage of green manure per farm (table 25).

Table 25 - NUMBER OF FARMS GROWING GREEN MANURE CROPS IN 1934, 1935, 1936, 1937 AND ACRES GROWN PER FARM IN THESE YEARS IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937

Type of Land	Number of Farms Growing Green Manure Crops				Acres of Green Manure Crops Grown per Farm			
	1934	1935	1936	1937	1934	1935	1936	1937
	Number	Number	Number	Number	Acres	Acres	Acres	Acres
Land Class II	1	-	-	2	3	-	-	7
Land Class III	4	5	7	4	6	7	7	10
Land Class IV	5	5	4	11	4	6	8	7
Land Class V	6	8	8	8	37	32	29	28
All Land Classes	16	18	19	25	17	18	17	14

Superphosphate

"Users" of Superphosphate

More farmers used superphosphate in 1937 than in any of the three previous years (table 26). Among the farmers participating in the Program, there was an increase of 43 per cent in the two years, 1936 and 1937, over 1934 and 1935 in the number using superphosphate. The number of users of superphosphate among the farmers not participating in the Program increased 31 per cent during the same period.

TABLE 26 - PER CENT OF PARTICIPATING AND NON-PARTICIPATING FARMERS VISITED WHO USED SUPERPHOSPHATE 1934, 1935, 1936, 1937, IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms: Proportion of Farms Visited Using Superphosphate				Non-Participating Farms: Proportion of Farms Visited Using Superphosphate			
	1934	1935	1936	1937	1934	1935	1936	1937
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
Land Class II	29	35	53	88	32	32	32	41
Land Class III	54	63	75	94	28	30	34	45
Land Class IV	58	57	66	94	52	44	59	67
Land Class V	63	71	74	94	45	45	64	73
All Land Classes	55	61	71	94	34	34	41	50

The greatest increase in "users" of superphosphate during 1936 and 1937 (Program years) occurred on Land Class II. In 1937, on Land Class II, 88 per cent of the participating farmers were using superphosphate, while in 1934 only 29 per cent of these same farmers were using this fertilizer. This represents an increase of 203 per cent during the past four years. There were more farmers using superphosphate previous to the Program on the higher land classes; therefore, the per cent increase is not as great as on Land Class II.

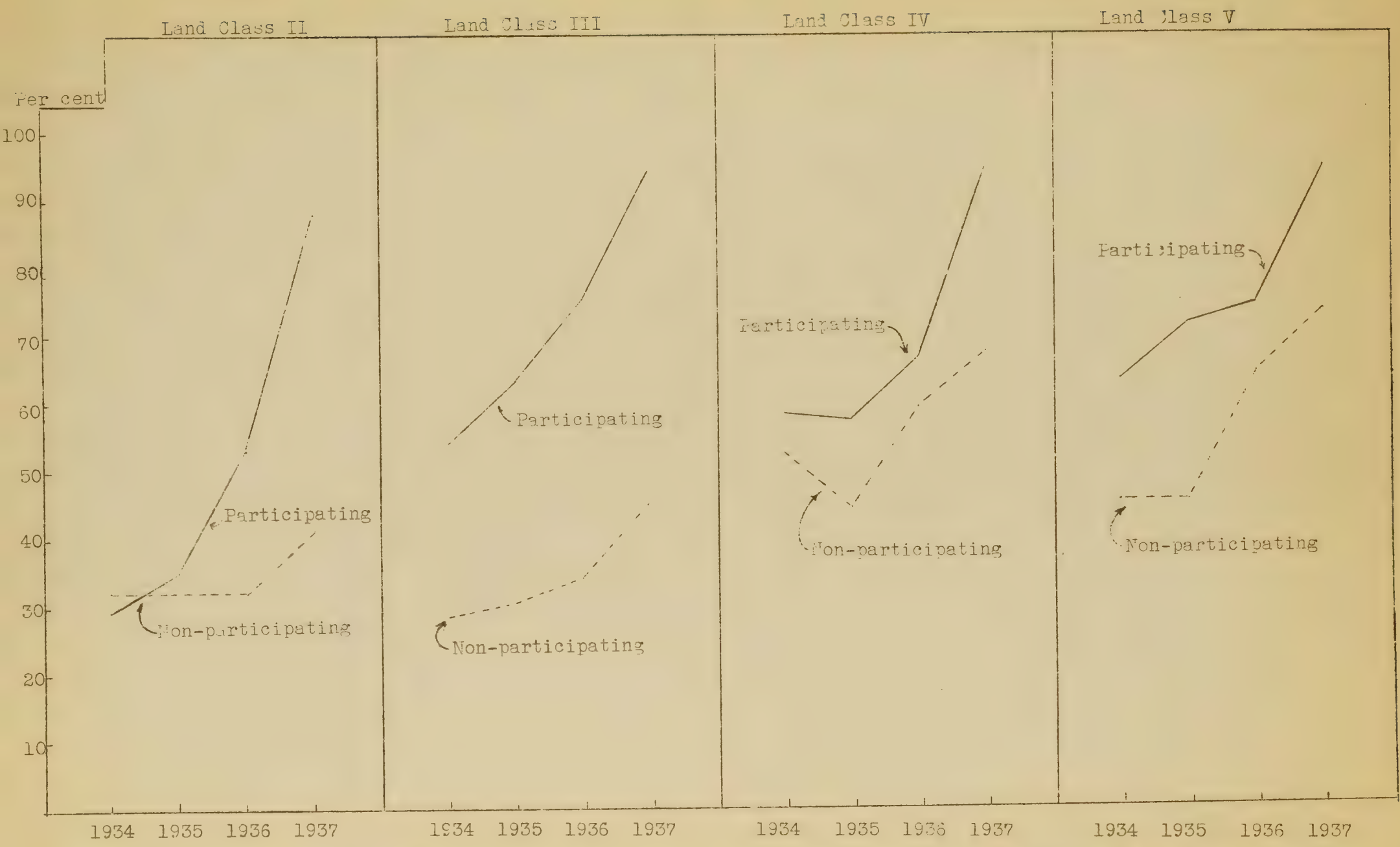


FIGURE 1. PROPORTION OF THE FARMS VISITED IN EACH LAND CLASS APPLYING SUPERPHOSPHATE DURING THE YEARS 1934 - 1937. A higher percentage of both participating and non-participating farmers used superphosphate in 1937 than in any of the three previous years.

Three hundred and sixty-four farmers who had records for the four years, 1934 to 1937, applied a total of 1146 tons in the two years 1934 and 1935, and applied 1626 tons in 1936 and 1937. This is an increase of 42 per cent in tonnage used as compared with the 43 per cent increase in "users" of superphosphate.

Use of Superphosphate

Since the survey was taken before the "check-up" of practices was completed, the amount of superphosphate which was paid for by the Agricultural Conservation Program could not be determined.

The 1937 Agricultural Conservation Program, Northeast Region, (NER-B-101-New York) encouraged the use of superphosphate on new seedings, on pasture, on crops to be used for green manure, on hay land, and with farm manure used on pasture, on hay land, and on new seedings. Some farmers with their own money bought superphosphate for beans, wheat, corn, potatoes, and other soil-depleting crops. They received superphosphate practice payments for establishing new seedings and for improving hay land and pastures equivalent to their soil-building allowance.

Of the farms surveyed, the ones participating in the 1937 Agricultural Conservation Program used more superphosphate than non-participating farms. There was a large increase in the amount of superphosphate used per acre of soil-depleting and soil-conserving crops on participating farms in Land Classes II and III (table 27).

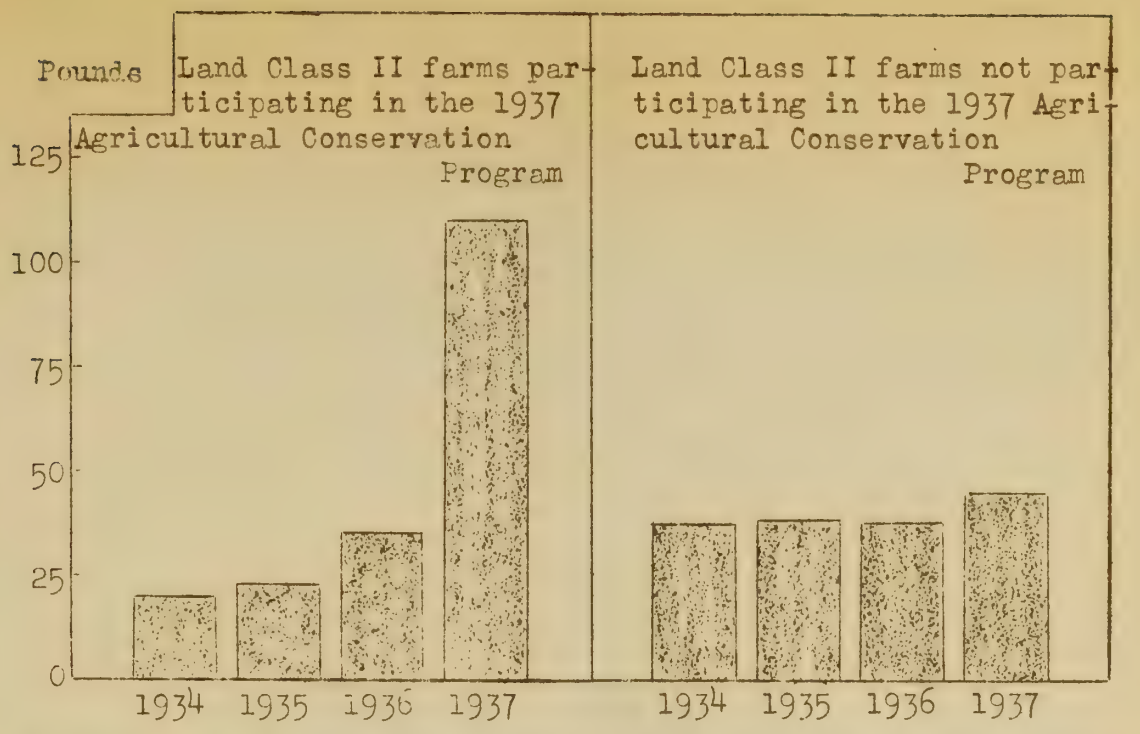


FIGURE 2. POUNDS OF 16 PER CENT SUPERPHOSPHATE PER ACRE OF SOIL-DEPLETING AND SOIL-CONSERVING CROPS ON POOR LAND (LAND CLASS II) ON PARTICIPATING AND NON-PARTICIPATING FARMS 1934 - 1937.

Superphosphate applied on participating farms increased 450 per cent from 1934 to 1937; on non-participating farms the increase was 19 per cent for the same period.

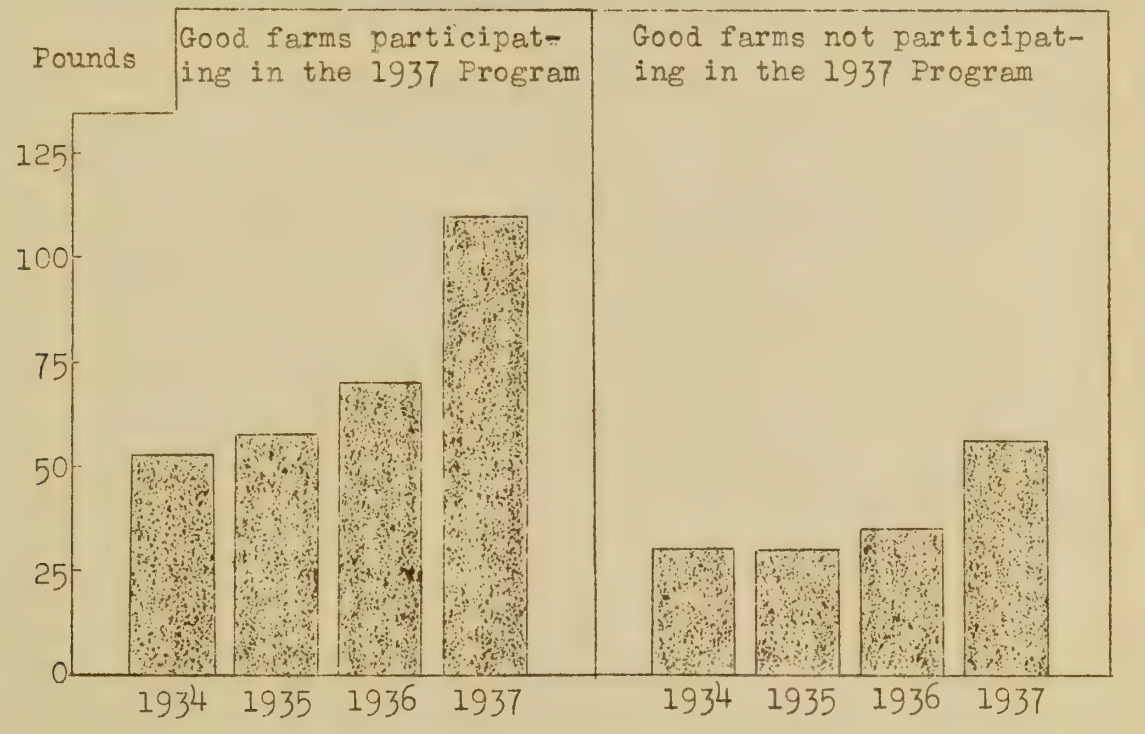


FIGURE 3. POUNDS OF 16 PER CENT SUPERPHOSPHATE PER ACRE OF SOIL-DEPLETING AND SOIL-CONSERVING CROPS ON GOOD LAND (LAND CLASSES III, IV, & V) ON PARTICIPATING AND NON-PARTICIPATING FARMS 1934 - 1937.

Superphosphate applied on participating farms increased 109 per cent from 1934 to 1937; on non-participating farms the increase was 81 per cent for the same period.

TABLE 27 - POUNDS OF SUPERPHOSPHATE* USED PER ACRE OF SOIL-DEPLETING AND SOIL-CONSERVING CROPS ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937

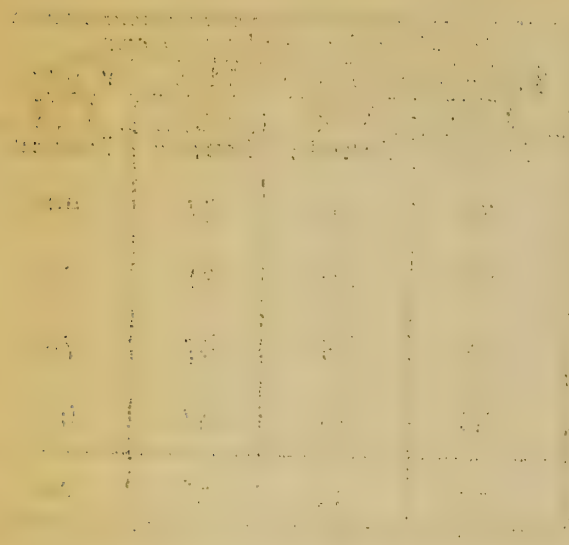
Type of Land	Participating Farms				Non-Participating Farms			
	Superphosphate applied per acre				Superphosphate applied per acre			
	1934	1935	1936	1937	1934	1935	1936	1937
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Land Class II	20	23	35	110	37	38	37	44
Land Class III	49	54	73	129	20	22	31	30
Land Class IV	70	72	74	91	53	48	47	78
Land Class V	42	49	52	85	50	46	33	60
All Land Classes	51	55	67	108	33	33	36	46

*Analysis: 16 pounds P_2O_5 per cwt.

In general, the farmers on Land Classes II and III have less money to spend for fertilizer than those on better land. By taking advantage of the superphosphate practice payments, many of these farmers who previously used small amounts of a complete fertilizer to establish legume seedings, were encouraged to change their fertilizing practices to a larger application of superphosphate under the Program. This shift in fertilizing practices was not as apparent on Land Classes IV and V because these farmers had been using considerable quantities of superphosphate previous to the Program. A higher proportion of the soil-depleting crops in Land Classes IV and V was in such cash crops as potatoes, beans, and wheat; since the superphosphate practice payments did not apply to such crops, a complete or mixed fertilizer was generally used on them.

Use on New Seedings

The amount of superphosphate used to establish new seedings on participating farms increased 115 per cent during the two years 1936 and 1937 over the years 1934 and 1935. An increase of 24 per cent occurred on non-participating farms during the same period (table 28).



WYOMING COUNTY FARM SURVEY Farm No._____

Carried out in cooperation with the Farm Bureau, the New York State College of Agriculture, and the Agricultural Conservation Program

Description of Farm

P. O._____ Town_____ County_____ R. R. Station_____

Miles to: station_____ milk disposal_____ buying center_____ hard road_____

Elevation _____ ft. hill farm_____ valley farm_____

Acres: owned_____ cash rented_____ share rented_____ total operated_____

Landlord_____ P.O._____ Rent $_____

Soil types: cropland_____ orchard_____ pasture_____

Type of farm_____ Land Class_____ Value $_____

General Information

Owned this farm_____ years Tenant this farm_____ years

Age of operator_____ years Tenant other farms_____ years

Number in family living on farm_____

Number of children over 16 years at home: boys_____ girls_____

Livestock

Kind	1935 Average No.	Inventory May 1 1936 Number	Inventory May 1 1937 Number	Hay eating animal units
Cows				
Heifers year old and over				
Calves under one year				
Bulls				
Sheep				
Horses				
Total hay-eating animal units				
Hogs	X X X X X X X			
Hens	X X X X X X X			
Chickens under 6 months	X X X X X X X			
Total other animal units				
Total animal units				

Unusual change in livestock numbers explained (disease eradication, etc.)_____

_____

Do you use superphosphate in the barn?_____ Amount per cow per day_____

Crop	1937 Acres	1937 Super-phos. R	1937 Super-phos. A	1937 Commer. Fert. R	1937 Commer. Fert. A	1937 Lime R	1937 Lime A	1937 Manure A's.	1936 Acres	1936 Super-phos. R	1936 Super-phos. A	1936 Commer. Fert. R	1936 Commer. Fert. A	1936 Lime R	1936 Lime A	1936 Manure A's.	1935 Acres	1935 Super-phos. R	1935 Super-phos. A	1935 Commer. Fert. R	1935 Commer. Fert. A	1935 Lime T	1935 Lime A	1935 Manure A's.	1934 Acres	1934 Super-phos. R	1934 Super-phos. A	1934 Commer. Fert. R	1934 Commer. Fert. A	1934 Lime R	1934 Lime A	1934 Manure Acres
Corn																																
Beans var.....																																
Potatoes var.....																																
Peas can. factory																																
Wheat seeded																																
Oats seeded																																
Wheat																																
Oats																																
Buckwheat																																
Alfalfa																																
Clover																																
Mixed legumes																																
Timothy																																
Green Manure and Cover Crops																																
Apples																																
Apples not bear.																																
Total Crop Land																																

Pasture

Total acres pastured_____permanent open_____rotated_____woods_____

What pasture improvement practices did you carry on during 1934 - 1935 _____

_____

What years?_____No. of acres improved: rotated_____permanent_____

Do you pasture the aftermath of meadows?_____

_____No. weeks_____

No. of acres of meadow converted into pasture since 1935: permanent_____rotated_____

Do you plan to convert any meadow into pasture this year?_____Acres: per.___rot.____

No. of acres of tillable pasture converted into cropland since 1935_____

Acres improved since the program: permanent_____rotated_____. Kind and

amount of seed per acre_____

Kind and amount of fertilizer per acre_____

Acres manured: _____rate per acre_____

Kind and amount of lime per acre_____

Pasture management practices_____

Woods

Did you ever fence off any woods on your farm?_____what years_____

_____No. of acres_____rods of fence used_____cost of

fence_____. Is the practice worth while?_____

Do you pasture your sugar bush?_____ Have you ever reforest-

ed any of your land?_____what years_____No. of acres_____

_____Kind of trees_____cost

per acre: trees $_____ ,labor $_____, total $_____.

Seeding Mixtures

Mixture used before the program: alfalfa _____red clover_____alsike_____

timothy_____red top_____sweet clover_____ _____

Mixture used 1937: alfalfa_____red clover_____alsike_____timothy_____

red top _____

Did you apply for a seeding payment this year?_____ $_____

Strip-Cropping

Have you ever done any strip-cropping?_____what years_____width of

strip_____slope_____% type of soil_____what results____

_____

What other erosion control practices have you used?_____

_____

General Remarks

_____

_____

_____

_____

TABLE 28 - POUNDS OF SUPERPHOSPHATE* USED PER ACRE TO ESTABLISH NEW SEEDINGS ON PARTICIPATING AND NON-PARTICIPATING FARMS 1934, 1935, 1936, 1937, IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms					Non-Participating Farms				
		Superphosphate per Acre					Superphosphate per Acre			
	Farms	1934	1935	1936	1937	Farms	1934	1935	1936	1937
	Number	lbs.	lbs.	lbs.	lbs.	Number	lbs.	lbs.	lbs.	lbs.
Land Class II	17	26	40	124	335	34	95	88	104	128
Land Class III	111	106	111	190	375	76	50	52	87	79
Land Class IV	53	138	192	185	354	27	112	84	78	128
Land Class V	35	83	97	146	215	11	159	164	151	185
All Land Classes	216	106	128	174	330	148	85	77	91	110

*Analysis; 16 pounds P_2O_5 per cwt.

The largest increase of superphosphate per acre of new seeding from 1934 to 1937 occurred on participating farms in Land Class II. The higher land classes used more superphosphate to establish new seedings previous to the Program, so the increase from 1934 to 1937 is not as great as for Land Class II.

Use on Pasture

The total amount of superphosphate applied on pasture on 216 participating farms was 77.6 tons during the two years 1936 and 1937, compared with 11.8 tons for the two previous years, 1934 and 1935. This means that 6½ times as much superphosphate was applied on pasture during the two Program years. For 148 farms not participating in the Program, a total of 2.4 tons of superphosphate was used during the past two years, compared with 1.2 tons for the two previous years, 1934 and 1935. The amount of superphosphate used on pasture doubled during the two Program years on non-participating farms.

Use in Stable

The amount of superphosphate used per stable per year was greater on participating than on non-participating farms (table 29). The fact that participating

farms are larger and have more livestock per farm partly explains this difference.

The farms on good land used between 2 and 3 times as much superphosphate in the stable as did the farms on poor land.

TABLE 29 - POUNDS OF SUPERPHOSPHATE USED PER STABLE PER YEAR ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms		Non-Participating Farms	
	Farms	Amount of Superphosphate per Stable per Year	Farms	Amount of Superphosphate per Stable per Year
	Number	Pounds	Number	Pounds
Land Class II	19	411	46	107
Land Class III	129	436	91	52
Land Class IV	67	1110	32	675
Land Class V	45	1191	14	700
All Land Classes	260	739	183	224

Lime

Use on Crop Land

More farmers used lime in 1937 than in any of the three previous years. On participating farms the greatest per cent increase of "lime-users" occurred on Land Classes II and III (table 30). A large number of the farmers on Land Classes IV and V had used lime previous to the Program and so the per cent increase in 1937 was not as large as for Land Classes II and III. Most of the farmers who have used lime in the past are participating in the 1937 Agricultural Conservation Program.

TABLE 30 - PER CENT OF THE FARMS VISITED APPLYING LIME, 1934, 1935, 1936, 1937, IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms				Non-Participating Farms			
	Per Cent Applying Lime				Per Cent Applying Lime			
	1934	1935	1936	1937	1934	1935	1936	1937
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
Land Class II	--	6	12	35	6	6	6	9
Land Class III	7	12	22	40	5	-	7	5
Land Class IV	25	26	34	62	11	11	7	7
Land Class V	17	26	40	54	-	-	9	18
All Land Classes	12	17	27	47	6	3	7	7

On participating farms, more lime has been applied per farm during the two years, 1936 and 1937, than was used during the two years previous to the Program, 1934 and 1935. The most striking increase occurred on Land Class II (table 31). It is also indicated in table 31 that Land Class V has used more lime per farm than the lower land classes. On the average, Land Class V farms are larger and this fact may account for a part of this difference in the amount of lime used per farm.

TABLE 31 - AMOUNT OF LIME APPLIED PER FARM BY FARMS APPLYING LIME IN 1934, 1935, 1936, 1937, IN EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms				Non-Participating Farms			
	Lime Applied per Farm				Lime Applied per Farm			
	1934	1935	1936	1937	1934	1935	1936	1937
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Land Class II	----	1.0	11.6	15.8	7.9	5.9	18.6	3.6
Land Class III	10.4	7.2	9.0	11.8	6.6	----	9.0	10.4
Land Class IV	11.1	11.0	11.0	13.3	11.6	8.0	32.0	36.3
Land Class V	16.8	17.5	17.7	15.0	----	----	24.0	9.0
All Land Classes	12.0	11.0	11.8	13.1	8.5	7.2	17.0	13.0

Use on Pasture

For all of the farms surveyed, the total amount of lime used on pasture was 17 tons for the two years previous to the Program and 223 tons during 1936 and 1937. This means that more than 13 times as much lime was used on pasture during the last two years compared with the two previous years. A large proportion of this increase probably can be attributed to the lime practice payments.

Reforestation

A total of 114 acres was reforested before the 1936 Agricultural Conservation Program. Of this, 72 acres were reforested on 41 farms by 4H Club and 42 acres were reforested by 13 farmers. This averages 1.8 acres per farm by 4H Club projects and 3.2 acres per farm by farmers. The State gives 1000 trees to each interested 4H Club member, so this probably accounts for the small acreage of reforestation done per farm. Most of this reforestation has occurred on Land Classes III and IV.

A total of 91 acres was reforested during 1936 and 1937. Of this, 4 farms had a total of 52 acres reforested by the CCC; 16 farms had a total of 21 acres reforested by 4H Club projects, and 5 other farms reforested a total of 18 acres. Some reforesting, therefore, was carried out during 1936 and 1937 on 25 of the 443 farms surveyed, of which only a very few qualified for a tree planting payment.

Erosion

The problem of soil erosion is one difficult to describe. There was such a wide variation in character of soil erosion that each farm had its own problem. There were 256 farmers who admitted that they had some form of erosion taking place on their farms, ranging from sheet erosion to severe gullying. This means that 3 out of every 5 farms had erosion in some form (table 32).

TABLE 32 - EROSION AND EROSION CONTROL ON EACH LAND CLASS
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Farms Visited	Farms with Erosion			Proportion of total farms visited having Erosion.
		With Erosion Control	Without Erosion Control	Total	
	Number	Number	Number	Number	Per Cent
Land Class II	65	18	26	44	68
Land Class III	220	61	83	144	65
Land Class IV	99	20	23	43	43
Land Class V	59	13	12	25	42
All Land Classes	443	112	144	256	58

It is indicated in table 32 that 68% of the farms in Land Class II had erosion, while only 42 per cent of the Land Class V farms had erosion.

Erosion control, as practiced by the farmers in table 32, includes such simple practices as plowing and rowing the crops around the hillside, leaving a dead furrow to divert water, seeding down and leaving the steep hillsides in permanent hay or pasture. Eighteen out of 44 Land Class II farms, or 41 per cent, practiced erosion control. Although erosion was not as serious on Land Class V farms, 52 per cent carried out erosion-control methods.

Of the 256 farms having erosion, only 22 laid out their land in narrow fields across the slope which would approach what is termed strip-cropping. Of these 22 farms, 3 were practicing strip-farming under the direction of the United States Soil Conservation Service. The width of the fields ranged from 150 feet to 30 rods. The problem of strip-farming is different for each individual farm. The farmers who are following strip-cropping practices admit that it checks erosion.

General Remarks on the 1937 Program

The general attitude of the farmers toward the 1937 Agricultural Conservation Program was recorded in their own words under the heading of "general remarks" on the questionnaire. To bring out the facts, their expressions of preference were

tabulated either "for" or "against" the Program and summarized as follows:

	"For"	"Against"	No Remarks Made
Participating Farms	77	21	162
Non-Participating Farms	15	30	138
Farm Bureau Members	18	10	79
Non-Farm Bureau Members	74	41	121
Land Class II	11	7	47
Land Class III	54	25	141
Land Class IV	16	14	69
Land Class V	11	5	43
All Land Classes	92	51	300

The general feeling of the farmers is in favor of the principles outlined by the 1937 Agricultural Conservation Program.

Numerous criticisms were made on the recommended superphosphate practices under the 1937 Agricultural Conservation Program. Many farmers believe that this fertilizer makes their soil acid. Experimental evidence has proved the contrary, yet because of the original name, "acid phosphate," the idea persists. Some of the common names applied to this fertilizer by farmers are: "acid phosphate," "acid goods," "cheap fertilizer," and "acid rock." There were some farmers who believed that superphosphate would burn up their seed during a dry period. These same farmers stated that they would rather use a smaller amount of a more expensive complete fertilizer than large amounts of "acid" phosphate. Every farmer interviewed said that the best place for "acid" phosphate was with manure or applied on pasture.

A summary of the opinions expressed follows:

	"For"	"Against"	No Remarks Made
Participating farms	21	32	207
Non-Participating farms	8	22	153
Farm Bureau Members	3	15	89
Non-Farm Bureau Members	26	39	271
Land Class II	5	7	53
Land Class III	20	37	163
Land Class IV	2	8	89
Land Class V	2	2	55
All Land Classes	29	54	360

The opinions expressed were voluntary and were taken from the general remarks section of the questionnaire. This method was used rather than a direct question, since the answers would not be biased by the way the enumerator asked the question. It is possible that a high proportion of those farmers who made no remarks are in favor of the recommended superphosphate practices. The data presented is not complete enough to justify any conclusions. It does show that many farmers have some incorrect ideas such as, that "superphosphate makes their soil acid" and "it burns up their seed." There may be some justification in the use of a complete fertilizer on winter wheat, especially at the higher elevations where the growing season is short, to give the wheat a good start before going into the winter.

SUMMARY AND CONCLUSIONS

Changes in farming practices in Wyoming County during the past four years are due principally to the following factors: practice payments of the Agricultural Conservation Program, the general price level, and the rural educaction promoted by the Extension Service.

The data obtained by a survey of 443 farms in Wyoming County deal primarily with the changes in farming practices resulting from the soil-conserving principles outlined by the Agricultural Conservation Program. The information was obtained for a four year period (1934 - 1937) in order to get a historical picture of the farming practices in the county. The Agricultural Conservation Program has been in effect during 1936 and 1937, so that a comparison of farming practices could be made with the two previous years, 1934 and 1935.

The total amount of superphosphate used on 443 farms increased 42 per cent during the two Program years.

The number of farmers using superphosphate in the two Program years increased 43 per cent for the participating group and 31 per cent for the non-participating group over those using it in 1934 - 1935. The largest percentage increase in "users" of superphosphate occurred on submarginal farm land.

The pounds of superphosphate applied per acre of crop land increased most on the poorer land (Land Classes II and III) during the two Program years.

In the two Program years, the amount of superphosphate used to establish new seedings was 115 per cent more on participating farms and 24 per cent more on non-participating farms than for 1934 and 1935. The largest percentage increase in amount of superphosphate used to establish new seedings occurred on submarginal farm land.

Participating farmers used 6½ times and non-participating farmers used twice as much superphosphate on pasture during the two Program years as was applied

the two previous years.

More farmers used lime in 1937 than in any of the three previous years. The per cent increase in "lime-users" was highest on Land Classes II and III.

More tons of lime were applied during the two Program years than during the two previous years. The greatest percentage increase occurred on submarginal farm land.

Only a small amount of lime was used on pasture. The proportional amount applied during the two Program years was 13 times that applied the two previous years.

Few farmers grew green manure and cover crops. The largest acreage per farm was grown on Land Class V.

More acres of new seedings were established on good than on poor land. Legume seedings increased on participating farms in all land classes during the two Program years.

More woodland was fenced to exclude livestock during the two Program years than was ever fenced before the Program.

The small amount of reforestation carried out during the past four years was done mainly by the 4H Clubs and the CCC.

Three out of every five farms visited reported soil erosion of some form. Sixty-eight per cent of the farms on Land Class II had erosion and of these, 41 per cent practiced simple erosion-control methods. Land Class V had the least erosion, 42 per cent, and had the most erosion control.

The greatest change in farming practices occurred on submarginal farm land. Before the Program, many farmers on this land used small quantities of a mixed fertilizer on their crops. These farmers were encouraged by practice payments under the Program to use superphosphate and lime.

A higher proportion of the farmers on good land signed under the 1937

Program than on poor land. Only 29 per cent of the farmers on Land Class II participated in the 1937 Program. On good land, Land Classes IV and V, 68 and 76 per cent, respectively, had signed under the Program. Of the 443 farmers visited, 260 or 59 per cent were participating in the 1937 Program.

Forty-six per cent of the tenants and fifty-eight per cent of the farm-owners signed under the 1937 Program.

A farmers' meeting* was held on November 30, 1937 at Warsaw, New York, to decide whether or not an Experimental Agricultural Conservation Program should be made for Wyoming County. The results of the survey of 443 farms were discussed in detail at this meeting. A vote was taken at the close of an all-day session, and it was decided that all of the practices designed by the State Agricultural Conservation Committee were essential for Wyoming County. It was requested by this group of farmers that the desirable practices be stressed in each type of farming area and on each land class by an educational program during the 1938 sign-up period. This method, it was thought, would be easier and less expensive to administer than a special county program for such a diversified type of county.

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* The minutes of the farmers' meeting are included in the appendix.

COMPARISON OF PARTICIPATING AND NON-PARTICIPATING FARMS AND A SUMMARY OF RELATED FACTORS

Wyoming County, New York. 1937

Summary of Factors		Participating Farms		Non-Participating Farms	
1. Number of Farms Visited		260		183	
2. Average Elevation per farm (ft.)		1513		1540	
3. Average size of farm: acres		176		134	
4. Farm Bureau Membership: Number		85		22	
5. : Per Cent		33		12	
6. *Owned Farms: Number		183		131	
7. : Per Cent		58		42	
8. *Tenant Farms: Number		29		34	
9. : Per Cent		46		54	
10. Cows per Farm:	1935	13.8		9.6	
11.	1936	14.1		9.6	
12.	1937	14.0		9.4	
13. Heifers per Farm:	1935	3.5		2.2	
14. (1 year and older)	1936	3.5		2.4	
15.	1937	4.6		2.9	
16. Sheep per Farm:	1935	12.6		2.8	
17.	1936	12.9		2.8	
18.	1937	10.5		2.8	
			*Per Cent		*Per Cent
19. Acres of Soil-Depleting Crops	1934	42	57	27	49
20. per Farm	1935	46	58	30	54
21. *Per Cent of crop land per	1936	46	58	30	53
22. farm in soil-depleting crops	1937	47	58	29	51
			*Per Cent		*Per Cent
23. Acres of Soil-Conserving Crops	1934	32	43	28	51
24. per Farm:	1935	33	42	26	46
25. *Per Cent of crop land per	1936	33	42	27	47
26. farm in soil-conserving crops	1937	34	42	28	49
			*Per Cent		*Per Cent
27. Acres of New Seeding per Farm	1934	16.4	22	10.1	18
28. *Per Cent of crop land per farm	1935	17.3	22	11.2	20
29. in New Seedings.	1936	18.5	23	10.4	18
30.	1937	17.9	22	9.5	17

*Owned -- owned all land in farm)
*Tenant -- rents all land in farm) 314 Farms. No part-owned, part-rented farms.

COMPARISON OF PARTICIPATING AND NON-PARTICIPATING FARMS AND A SUMMARY OF RELATED FACTORS
WYOMING COUNTY, NEW YORK. 1937.

Summary of Factors		Participating Farms	Non-Participating Farms
31. Acres Pasture Seeded per Farm - 1934-'35		0.3	0.2
32.	- 1936-'37	1.0	0.3
33. Acres of Green Manure per	1934	1.1	0.2
34. Farm	1935	1.4	0.1
35.	1936	1.4	0.1
36.	1937	1.5	0.1
37. Pounds of Superphosphate on	1934	3767	1814
38. Crops per Farm	1935	4340	1844
39 (Average)	1936	5288	2032
40.	1937	8676	5298
41. Number of Farmers using	1934	118	51
42. Superphosphate	1935	131	51
43.	1936	153	60
44.	1937	202	74
45. Pounds of Superphosphate per	1934	6895	5265
46. Farm by "Users" of	1935	7156	5351
47. Superphosphate	1936	7466	5012
48.	1937	9265	5298
49. Pounds of Superphosphate per	1934	93	96
50. Acre* by "Users" of	1935	91	96
51. Superphosphate	1936	95	88
52.	1937	115	92
53. Pounds of Superphosphate	1934	1740	860
54. per Farm Used to Estab-	1935	2209	865
55. lish Seedings	1936	3227	949
56.	1937	5901	1049
57. Pounds of Superphosphate Used per Stable per year		739	224

*Per acre of soil-conserving and soil-depleting crops.

COMPARISON OF PARTICIPATING AND NON-PARTICIPATING FARMS AND A SUMMARY OF RELATED FACTORS
WYOMING COUNTY, NEW YORK. 1937.

Summary of Factors		Participating Farms	Non-Participating Farms
58. Pounds of Superphosphate	1934-'35	110	16
59. Used per Farm on Pasture	1936-'37	719	32
60. Number of Farms using Lime	1934	27	9
61.	1935	37	5
62.	1936	58	10
63.	1937	102	11
64. Tons of Lime Used per Farm	1934	12.0	8.5
65. by "Users" of Lime	1935	11.0	7.2
66.	1936	11.8	17.0
67.	1937	13.1	13.0
68. Tons of Lime Used per	1934-'35	0.04	0.06
69. Farm on Pasture	1936-'37	0.78	0.37
70. Acres of Woods Fenced per	Before 1936	1.8	1.3
71. Farm to Keep Out Livestock	1936-'37	2.2	0.1
72. Acres Woods Pastured per Farm	1937	18	14

COMPARISON OF LAND CLASSES AND A SUMMARY OF RELATED FACTORS
WYOMING COUNTY, NEW YORK. 1937

Summary of Factors		LAND CLASS II	III	IV	V	Average - All Land Classes or Total
1. Number of Farms Visited		65	220	99	59	443
2. Average Elevation per Farm (ft.)		1651	1568	1455	1339	1524
3. Average Size of Farm: Acres		145	154	169	176	159
4. Farm Bureau Membership:	Number	2	47	26	32	107
5.	Per Cent	3	21	26	54	24
6. Cows per Farm	1937	7	13	14	12	12
7. Heifers per Farm	1937	3	4	5	4	4
8. Sheep per Farm	1937	0.6	1.4	16.2	23.3	7.5
9. Acres Soil-Depleting Crops per Farm	1937	24	34	50	70	41
10. Acres Soil-Conserving Crops per Farm	1937	30	32	29	33	31
11. Acres New Seeding per Farm	1937	8	13	20	24	15
12. Acres Pasture Seeded per Farm	1936-1937	1.2	0.3	1.7	1.9	1.0
13. Acres Green Manure per Farm	1937*	--	0.3	1.4	6.3	1.5
14. Pounds of Superphosphate per Farm on Crops	1937*	6405	9029	7880	9798	8676
15. Tons of Lime per Farm on Crops	1937*	15.8	11.8	13.3	15.0	13.1
16. Acres of Woods Fenced per Farm to keep out	Before 1936*	3.4	1.4	2.3	1.5	1.8
17. Livestock	1936-1937*	4.1	2.6	1.2	1.5	2.2
18. Acres of Woods Pastured per Farm	1937*	20.6	21	17	9	18
19. Number of Farms	:no control	26	83	23	12	144
20. with erosion	:with control	18	61	20	13	112
21. Participation in	:number	19	129	67	45	260
22. Program	:per cent	29	59	68	76	59

*Figures given are for Participating Farms only (260 Farms).

TABLE 13 - ACRES OF SOIL-DEPLETING CROPS IN EACH LAND CLASS ON PARTICIPATING AND NON-PARTICIPATING FARMS, 1934-1937
WYOMING COUNTY, NEW YORK. 1937

Type of Land	Participating Farms					Non-Participating Farms				
	Soil-Depleting Crops per Farm					Soil-Depleting Crops per Farm				
	Farms	1934	1935	1936	1937	Farms	1934	1935	1936	1937
	Number	Acres	Acres	Acres	Acres	Number	Acres	Acres	Acres	Acres
Land Class II	17	24	29	28	31	34	22	21	21	19
Land Class III	111	33	37	37	36	76	23	26	26	26
Land Class IV	53	47	51	52	53	27	40	45	44	44
Land Class V	35	69	73	76	79	11	36	47	46	50
All Land Classes	216	42	46	46	47	148	27	30	30	29

The variations in acres of soil-depleting crops grown from year to year are greater than that in acres of soil-conserving crops (table 14).

TABLE 14 - ACRES OF SOIL-CONSERVING CROPS ON PARTICIPATING AND NON-PARTICIPATING FARMS IN EACH LAND CLASS, 1934-1937
WYOMING COUNTY, NEW YORK. 1937.

Type of Land	Participating Farms					Non-Participating Farms				
	Soil-Conserving Crops per Farm					Soil-Conserving Crops per Farm				
	Farms	1934	1935	1936	1937	Farms	1934	1935	1936	1937
	Number	Acres	Acres	Acres	Acres	Number	Acres	Acres	Acres	Acres
Land Class II	17	29	28	28	27	34	30	29	30	31
Land Class III	111	32	33	34	34	76	27	26	26	28
Land Class IV	53	31	31	31	33	27	29	25	26	27
Land Class V	35	36	35	35	37	11	20	17	20	21
All Land Classes	216	32	33	33	34	148	28	26	27	28

The acres of soil-conserving crops per farm do not vary much between farms on good and poor land. More livestock are kept per farm on the good land than on poor land; therefore, the yields of hay must be higher on the better land.

The effect of the 1937 Agricultural Conservation Program on acres of soil-depleting and soil-conserving crops is small. A late, wet spring often causes many changes in the type of crops grown.

M I N U T E S

O F

A meeting of the Wyoming County Agricultural Conference Board, the Wyoming County Agricultural Conservation Committee, and the Wyoming County Farm Bureau Executive Committee held at the Farm Bureau Office, Warsaw, New York, on Tuesday, November 30th, at ten o'clock. The meeting was called to order by Harold L. Peet, Chairman of the Agricultural Conference Board.

The following members responded to roll call: Ben Hakes and Charles McNulty, both of Java Center; Fred Meissel, Jr., of Warsaw; Lawrence Wallace, Lester J. Wilson and Arthur J. Smith, all of Gainesville; Raymond Kelly, of Wyoming; Hugh Wilson, Clayton Merkly, and Chas. J. Lindsey, all of Attica; E. Guy Cooper and Boyd Bacon, both of Perry; Sidney C. Barber, of Bliss; Henry P. Wilson, C. Scott DeGolyer, H. J. Harrison, Fred R. Walkley, Rev. Henry Stevens and George Sherman, all of Castile; Harold L. Peet and F. C. Gibbs, both of Pike; Francis Edsall, of Arcade; Fred B. Morris, Assistant County Agent Leader; Earl A. Flansburgh, County Agent Leader and State Executive Officer; George Serviss from the Department of Agronomy; W. T. Grams, Senior Field Officer, Agricultural Conservation, and Frank Beck, Special Conservation Agent, all of Ithaca; Ernest Bradley, Silver Springs; Lawrence Draper, Mt. Morris; and C. Bernard Weeks, Conservation Agent, and Everett H. Clark, County Agricultural Agent, both of Warsaw.

Earl A. Flansburgh, State Executive Officer, discussed the purpose of the meeting, stating that Wyoming County had been chosen as a demonstration county to try out a program best suited to our needs. He further stated that a special program may be developed for the county. Mr. Flansburgh also said that Wyoming County was chosen because of its diversified farming. The western part of the county is suited to potato growing and dairy farming. The eastern part of the county is especially adapted to growing cash crops; while in the valleys we have fruit areas.

Frank Beck, Special Conservation Agent, gave a summarized report of the survey he made of 443 farms in Wyoming County this summer. Many of the facts presented raised questions which were discussed by the group.

Following the discussion of the survey report, the farmers divided into three types of farming groups; namely, potatoes, beans, and fruit, and discussed their common problems over the dinner table.

The afternoon session was called to order by Chairman Harold L. Peet at 1:30 P. M.

A colored motion picture was shown which described the land classes. This picture was taken on a Wyoming County Land Classification Tour. Mr. Clark, County Agricultural Agent, interpreted the picture and gave statistics as to yields of crops and school costs in the various land classes.

The following points were discussed:

1. Lime Practice

Potato farms could use less than one ton per acre. The Program won't allow less than one ton nor over two tons. It was stated that "Liming practices are designed to increase soil-conserving crops (legumes) and not soil-depleting crops (potatoes). Potatoes might benefit from one-half ton of lime, also not allowed by the Program.

2. Reforestation Practice

While it is a sound soil-conserving practice, it is not adapted to individual farmers to carry out. "Reforestation requires a long-term program; it is more of a public problem and should be handled through a state or national agency."

The subject was passed over by the Board.

3. Superphosphate Practices

The uses of superphosphate were discussed in great detail. The favorable comments over-balanced the unfavorable comments, and it was decided to continue the practices as outlined in the State Program for 1938. The use of superphosphate on pastures and with manure was stressed.

4. Erosion Control

Regular erosion control requires the advice of technically trained men. A suggestion was made that seeding and superphosphate

practices be stressed on the steep slopes. This would be fundamental erosion control which can be carried out in connection with the regular soil-conserving practices.

One farmer said that he had not realized that erosion was taking place on his farm until the last few years. He suggested that something be done to bring the erosion problem before the farmers.

Another farmer suggested that the Granges scattered throughout the county should hold community meetings and have a technically trained man discuss soil erosion control with the farmers.

5. Soil Tests

A suggestion was made to have the farmers bring soil samples to some convenient place where the Conservation Agents could pick them up and analyze them. This method will increase the number ofsoil samples which can be analyzed by a few agents.

A letter of instructions on the correct method of taking a soil sample should be sent to each farmer.

6. Soil-Conserving Practices to be Stressed

The eight most common soil-conserving practices were listed on the blackboard and discussed.

These eight practices are:

1. Establishing legume seedings
2. Applying superphosphate
3. Applying Potash
4. Liming crop and pasture land
5. Green manure and cover crops
6. Mulching orchards
7. Woodland practices
8. Erosion control

After discussion, the practices, all but No. 3 (applying potash), were considered essential for the 1938 Experimental Program. A ballot was taken and each farmer voted for the practices he believed ought to be stressed in the 1938 Program. The vote showed that practices 1, 2, and 4 were outstanding in importance and should be stressed by an educational program at the time the work sheets are filed. It will be necessary to employ several trained men for three or four weeks to put over the educational program.

Practices 5, 7, and 8 were also discussed and recommended for certain types of farms.

It was the general consensus of opinion that more personal guidance should be given each individual farmer in planning his 1938 soil-conserving practices. The phases of soil conservation which should be stressed are those which conform with the long term objectives outlined by the Agricultural Conservation Program.